

VARTANYAN, S.A.; CHUKHADZHYAN, G.A.

Chemistry of vinylacetylene. Report No.19: Condensation  
of vinylacetylenic hydrocarbons with ketones in the presence  
of sodium hydroxide powder. Izv.AN Arm.SSR.Khim.nauki 12  
no.6:413-416 '59. (MIRA 13:7)

1. Institut organicheskoy khimii AN ArmSSR.  
(Hydrocarbons) (Ketones) (Condensation products)

VARTANYAN, S.A.

Activity of alkoxy and acyloxy groups located in various positions  
in relation to the carbonyl group, and their reactions. Trudy  
Inst.khim.AN Azerb.SSR 17:154-163 '59. (MIRA 13:4)

1. Institut khimi AN ArmSSR.  
(Alkoxy groups)

SOV/79-29-2-21/71

AUTHORS: Matsoyan, S. G., Chukhadzhyan, G. A., Vartanyan, S. A.

TITLE: Chemistry of Vinyl Acetylene (Khimiya vinilatsetilena). XI. On the Mechanism and the Direction of the Hydration of Vinyl Ethynyl Carbinol Ether (XI. O mekhanizme i napravlennosti hidratatsii efirov viniletinilkarbinolov)

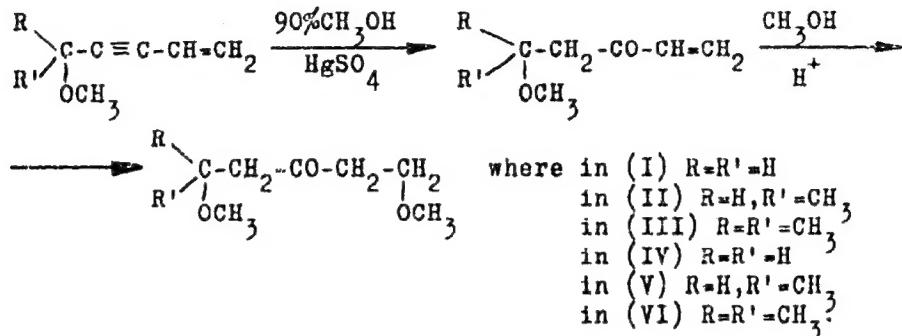
PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 451-457 (USSR)

ABSTRACT: In follow-up to an earlier paper by Nazarov and Matsoyan, the authors continued the hydration of vinyl ethynyl carbinol ether in acetic acid solutions with a view to clarifying the affiliation arrangements of the water elements to the triple bond. It was found that the ethers of vinyl ethynyl carbinols, unlike their esters, are smoothly transformed into  $\beta$ -keto derivatives in alcohol solutions in the presence of  $HgSO_4$ . Thus, for example, on heating the methyl ethers of vinyl ethynyl carbinol (I), methyl vinyl ethynyl carbinol (II) and dimethyl vinyl ethynyl carbinol (III) with 90% methanol in the presence of  $HgSO_4$ , the corresponding  $\beta$ -methoxy ketones (IV)-(VI) are formed according to the scheme

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Chemistry of Vinyl Acetylene. XI. On the Mechanism and the Direction of the  
Hydration of Vinyl Ethynyl Carbinol Ether



It was thus shown that on the hydration of the vinyl ethynyl carbinol ethers under above conditions the affiliation of water to the triple bond takes place in the direction of the formation of  $\beta$ -keto derivatives. Hydration of both acetate and ether of methyl ethyl carbinol under above conditions was found to proceed in one direction with the formation of the  $\beta$ -keto derivative. It was shown that the acetate of vinyl ethynyl carbinol,

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SOV/79-29-2-21/71

Chemistry of Vinyl Acetylene. XI. On the Mechanism and the Direction of the  
Hydration of Vinyl Ethynyl Carbinol Ether.

like the other acetates of the secondary and tertiary vinyl ethynyl carbinols is hydrated in the direction to the  $\alpha$ -keto derivatives. It is attempted to make the above hydration direction of the ethers of vinyl ethynyl and methyl ethynyl carbinols dependent on the electrophilic affiliation arrangement of the sulfuric acid mercury (of the water elements) to the triple bond. There are 17 references 15 of which are Soviet.

ASSOCIATION: Khimicheskiy institut Akademii nauk Armyanskoy SSR (Chemical Institute of the Academy of Sciences, Armyanskaya SSR)

SUBMITTED: December 7, 1957

Card 3/3

5 (3)  
AUTHORS:

Nazarov, I. N. (Deceased), Matsoyan, S. G., Vartanyan, S. A.

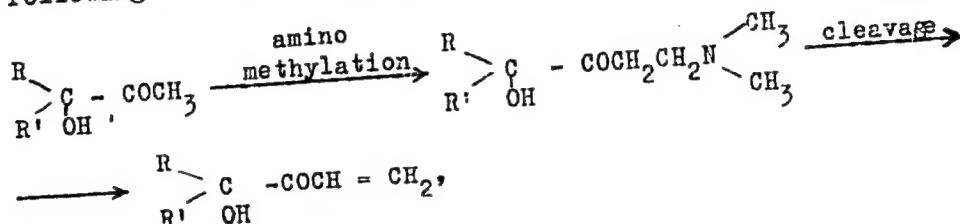
SOV/79-29-3-9/61

TITLE:

Synthesis and Transformations of Vinyl- $\alpha$ -Keto Alcohols  
(Sintez i prevrashcheniya vinil- $\alpha$ -ketospirov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 3, pp 778-783 (USSR)

ABSTRACT: Unsaturated  $\alpha$ -keto alcohols are highly active owing to their functional groups and a double bond. In the work under review the authors carried out the synthesis of the vinyl- $\alpha$ -keto alcohols for the purpose of further investigating the properties and transformations of the unsaturated  $\alpha$ -keto alcohols (Ref 1). The synthesis of the unsaturated  $\alpha$ -keto alcohols with a non-substituted vinyl group was carried out according to the following scheme; proceeding from the tertiary acetyl carbinols:



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SOV/79-29-3-9/61

Synthesis and Transformations of Vinyl- $\alpha$ -Keto Alcoholswhere (I)  $R=R'=CH_3$ (IV)  $R=R'=CH_3$ ,(II)  $R=CH_3$ ,  $R'=C_2H_5$ (V)  $R=CH_3$ ,  $R'=C_2H_5$ (III)  $R,R'=(CH_2)_5$ (VI)  $R,R'=(CH_2)_5$ .

The reaction according to Mannich with the tertiary acetyl carbinols proceeded in the normal way and resulted in a yield of 70% of  $\beta$ -amino- $\alpha$ -keto alcohols, thus, for example, the compounds (I), (II) and (III) were obtained, which readily passed to the ester. Such esters may be of pharmacological importance and may serve as sources for the synthesis of physiologically active products. At 140-200° the iodine ethylates or hydrochlorides of the amino keto alcohols (I), (II) and (III) are transformed in vacuum into the corresponding vinyl- $\alpha$ -keto alcohols (IV), (V) and (VI). These are colorless, strong smelling, lacrimary liquids. Unlike  $\alpha$ -keto alcohols with a substituted vinyl group, they polymerize already at room temperature into a gelatin and then pass over to a glassy mass. On hydrogenating over a Pt-catalyst, vinyl keto alcohols absorb one mol hydrogen and form the corresponding saturated  $\alpha$ -keto alcohols (VII), (VIII) and (IX). They affiliate water, alcohols and amines under formation of

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SOV/79-29-3-9/61

Synthesis and Transformations of Vinyl- $\alpha$ -Keto Alcohols

$\beta$ -functional-substituted  $\alpha$ -oxyketones; thus, for example, compound (IV) passes over to keto diol (X), (V) and (VI) into (XI) and (XII). Ketone (XIII) forms in the acetylation of (IV). There are 3 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Armyanskoy SSR  
(Institute of Organic Chemistry of the Academy of Sciences,  
Armyanskaya SSR)

SUBMITTED: January 27, 1958

Card 3/3

87227

S/171/60/013/001/002/005  
E142/E465

15.8.20

2109.2209

Vartanyan, S.A., Musakhanyan, G.A., Shagbatyan, Sh.L.  
and Ordyan, M.B.

AUTHORS:

TITLE: The Synthesis of New Plasticizers Based on  
1,3-Dichloro-2-butenePERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR, Khimicheskiye  
nauki, 1960, Vol.13, No.1, pp.31-35

TEXT: The dichloro-crotyl ester was prepared by direct synthesis from 1,3-dichloro-2-butene by heating the starting material with the sodium salt of phthalic acid in the presence of a catalyst (pyridine). A mixture of stereoisomers of di- $\gamma$ -chloro-crotyl phthalates is formed (yield = 70%). The crystalline form (m.p. = 43°C) is separated, in its pure form, by crystallizing the same from benzene, the liquid isomer (b.p. = 186 to 188°C at 2 mm,  $n_D^{20} = 1.5355$ ) is obtained from the mother liquor by vacuum distillation. Earlier investigations have shown that 1,3-dichloro-2-butene and compounds containing the chlorocrotyl residue, exist in two stereoisomeric forms. Experimental results indicate that the crystalline as well as the liquid isomers can be used as plasticizers instead of the widely utilized dibutyl

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S/171/60/013/001/002/005  
E142/E465

The Synthesis of New Plasticizers Based on 1,3-Dichloro-2-butene

phthalate. Results of tests, carried out on polyvinyl chloride, when using the above described plasticizer, are given in a table. Mixed esters of phthalic acid were also prepared by heating phthalic anhydride with butyl, hexyl, heptyl and octyl alcohol and subsequent addition of  $\gamma$ -chlorocrotyl alcohol and toluene sulphonic acid as catalyst. The freezing points of the individual plasticizers are of especial importance during the preparation of frost-resistant synthetic materials; it should be noted that the synthesized  $\gamma$ -chlorocrotyl ester of salicylic acid has a freezing point of -32°C. Details of the preparation and analytical data of the composition of the prepared esters are given. There are 2 tables and 3 Soviet references.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR  
(Institute of Organic Chemistry, AN ArmSSR)

SUBMITTED: August 7, 1959

Card 2/2

S/171-x/60/013/002-3/003/005  
E142/E435

AUTHORS: Vartanyan, S.A. and Badanyan, Sh.O.

TITLE: The Chemistry of Vinyl Acetylene. I Part XX.  
Addition of Amines and Ammonia to Vinyl Acetylene  
Tetrahydro-4-Pyranol and Tetrahydro-4-Thiopyranol

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR,  
Khimicheskiy nauki, 1960, Vol.13, No.2-3, pp.133-140

TEXT: The addition of amines to vinyl acetylene alcohols containing tetrahydro-thiopyran- and tetrahydro pyran rings is described. Amino acetylene tetrahydro pyranols and -thiopyranols are active vulcanizing agents and valuable starting materials for the synthesis of various physiologically-active substances. The vinyl acetylene alcohols were prepared by the method described by I.N.Nazarov, A.I.Kuznetsova and A.I.Gurevich (Ref.2). The amines and the 4-vinyl ethynyl-4-tetrahydro-thiopyranols were heated with a 25% aqueous mixture of dimethylamine and vinyl acetylene tetrahydro pyranols in a closed metal bomb over a water bath for 30 to 35 hours; 4-(4'-dimethylamino-2'-butynyl)-tetrahydro-4-thiopyranols were formed. The vinyl acetylene tetrahydro-4-pyranols were prepared by an analogous process.



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S/171-x/60/013/002-3/003/005  
E142/E435

The Chemistry of Vinyl Acetylene. Part XX. Addition of Amines and Ammonia to Vinyl Acetylene Tetrahydro-4-Pyranol and Tetrahydro-4-Thiopyranol

The vinyl acetylene pyranols were obtained by condensing the vinyl acetylene with tetrahydro-4-pyrans; the latter were synthesized by hydrating the corresponding vinyl acetylene alcohols in a 7% H<sub>2</sub>SO<sub>4</sub> medium in the presence of mercuric sulphate. When aqueous solutions of methyl and ethyl amines and also of dimethyl amine and piperidine are heated with the above-mentioned 4-divinyl ethynyl tetrahydro-4-pyranols, the corresponding aminoacetylene pyranols are formed. The synthesized amino acetylene tetrahydro-4-pyranols and -thiopyranols are converted in an ethyl alcohol medium, in the presence of a platinum catalyst, into the corresponding saturated compounds. Hydrogenation of 4-(1'-amino-2'-butynyl)-2,2-dimethyl tetrahydro-4-pyranol leads to the decomposition of this amine and 4-butyl-2,2-dimethyl tetrahydro-4-pyranol is formed. Difficulties experienced during the hydrogenation of thiopyranols were obviously due to the poisoning of the catalyst. The preparation of the various compounds is described in detail and physical and analytical data

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S/171-x/60/013/002-3/003/005  
E142/E435

The Chemistry of Vinyl Acetylene. Part XX. Addition of Amines and Ammonia to Vinyl Acetylene Tetrahydro-4-Pyranol and Tetrahydro-4-Thiopyranol

are given. There are 1 table and 6 Soviet references.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR  
(Institute of Organic Chemistry, AS ArmSSR)

SUBMITTED: December 21, 1959

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VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No. 21: Synthesis and conver-  
sions of vinylacetylenic amines. Izv. AN Arm. SSR Khim. nauki 13  
no.2/3:141-145 '60. (MIRA 13:10)

1. Institut organicheskoy khimii AN ArmSSR.  
(Butenyne) (Amines)

VARTANYAN, S. A.; TOSUNYAN, A. O.; MESROPYAN, L. G.

Chemistry of vinylacetylene. Report No. 22: Addition of  $\gamma\beta$ -dichloroethyl ether to 2-chloro-1,3-butadiene, and conversions of the trichlorides thus produced. Izv. AN Arm. SSR Khim. nauki 13 no.2/3:147-154. '60. (MIRA 13:10)

1. Institut organicheskoy khimii AN ArmSSR.  
(Ether) (Butadiene)

87236

S/171/60/013/004/003/004  
E142/E265

15.8102

AUTHORS:

Vartanyan, S. A., Vardapetyan, S. K. and  
Badanyan, Sh. O.

TITLE:

The Chemistry of Vinylacetylene. Part 23: Synthesis  
of Vinylacetylene Phenols and their Methyl Esters

PERIODICAL:

Izvestiya Akademii nauk Armyanskoy SSR, Khimich-  
eskiye nauki, 1960, Vol. 13, No. 4, pp. 251-258

TEXT: The synthesis of the above mentioned compounds,  
containing alkyl, alicyclic and heterocyclic radicals, is  
described. They were prepared by condensing phenol and anisole  
with secondary vinylacetylene carbinols in the presence of  
phosphoric acid and heating the mixture for 40 to 50 hours to a  
temperature of 60 to 65°C. The formed vinylacetylene phenols  
absorbs (in the presence of a platinum catalyst and in an absolute  
ethanol medium) three molecules of hydrogen so that saturated  
p-alkylphenols are obtained. Divinylacetylene enters into a  
similar condensation reaction with phenol, under analogous  
conditions. 1-Vinylethylnylcyclohexan-1-ol can also be condensed  
with phenol and anisole and 1-vinylethylnyl-1-p-alkoxy or

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S/171/60/013/004/003/004  
E142/E265

The Chemistry of Vinylacetylene. Part 23: Synthesis of  
Vinylacetylene Phenols and their Methyl Esters

oxyphenylcyclohexane are formed; these are hydrogenated to the saturated alicyclic phenol or its methyl ester, respectively. The structure of the vinylacetylene phenols was proved by oxidation of the 1-p-methoxyphenyl-1-vinylethynyl cyclohexane. The alkylation of phenol and anisole with 4-vinylethylnyltetrahydro-4-pyranols proceeds in an analogous manner. Physical data, percentage composition and analytical details of the synthesised compounds are given and also set out in a 2-page table. There are 1 table and 7 references; 6 Soviet and 1 non-Soviet.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR  
(Institute for Organic Chemistry, AS ArmSSR)

SUBMITTED: May 28, 1960

Card 2/2

VARTANYAN, S.A.; MUSAKHANYAN, G.A.; OGANOVA, L.V.

Chemistry of allyl chlorides. Report No.1: Synthesis of 1-nitrilo-  
5-alkoxy-2-pentenes. Izv. AN Arm.SSR. Nauki 13 no. 5:347-350  
'60. (MIRA 14:2)

1. Institut organicheskoy khimii AN ArmSSR.  
(Pentene)

VARTANYAN, S.A.; SHAGBATYAN, Sh.L.

C-alkylation by means of  $\beta$ -alkoxyketones. Izv. AN Arm. SSR. Khim.  
nauki 14 no.1:43-49 '61. (MIRA 15:5)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Ketones) (Alkylation)

VARTANYAN, S.A.; BADANYAN, Sh.O.

New possibility of synthesizing vinylacetylenic alcohols. Izv.  
AN Arm.SSR,Khim,nauki 14 no.1:79-80 '61. (MIRA 15:5)  
(Alcohols)

S/081/62/000/017/045/102  
B158/B186

AUTHORS: Yartanyan, S. A., Vardapetyan, S. K., Badanyan, Sh. O.

TITLE: The chemistry of vinylacetylene. Communication XXVI.  
Synthesis of aminoacetylene phenols and their esters

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 184, abstract  
17Zh118 (Izv. AN ArmSSR. Khim. n., v. 14, no. 3, 1961,  
255-260 [summary in Arm.])

TEXT: It is established that amines combine with vinylacetylene phenols and their esters to form aminoacetylene phenols and their esters according to the scheme:  $n\text{-ROC}_6^{\text{H}}_4\text{CR}'(\text{CH}_3)\text{C}=\text{CCH}=\text{CH}_2$  [Ia-j; in all cases aR = H, R' = R'' = R''' = CH<sub>3</sub>; bR=H, R'=C<sub>2</sub>H<sub>5</sub>, R''=R'''=CH<sub>3</sub>; cR=H, R'=CH<sub>3</sub>, R''=H, R'''=C<sub>2</sub>H<sub>5</sub>; dR=H, R'=CH<sub>3</sub>, R''+R'''=(CH<sub>2</sub>)<sub>5</sub>; eR=H, R'=C<sub>2</sub>H<sub>5</sub>, R''+R'''=(CH<sub>2</sub>)<sub>5</sub>; fR=R'=R'''=CH<sub>3</sub>; gR=R''=R'''=CH<sub>3</sub>, R'=C<sub>2</sub>H<sub>5</sub>; hR=C<sub>2</sub>H<sub>5</sub>, R'=R''=R'''=CH<sub>3</sub>; iR=C<sub>3</sub>H<sub>7</sub>, R'=R''=R'''=CH<sub>3</sub>; jR=C<sub>4</sub>H<sub>9</sub>, R'=R''=R'''=CH<sub>3</sub>] + HNR''R'''(IIa-j)  $\rightarrow$  n-RO<sub>6</sub><sup>H</sup><sub>4</sub>CR(CH<sub>3</sub>)CH<sub>2</sub>C=CCH<sub>2</sub>NR''R'''  
(IIIa-j); IIIa-b, f-g are reduced to saturated aminophenols and their

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S/081/62/000/017/045/102  
B158/B186

The chemistry of vinylacetylene...

esters: IIIa-b, f-g + 2H<sub>2</sub> → nROC<sub>6</sub>H<sub>4</sub>CR(CH<sub>3</sub>)(CH<sub>2</sub>)<sub>4</sub>NR''R''' (IV-VII,  
IVR=H, R'=R''=CH<sub>3</sub>, VR=H, R'=C<sub>2</sub>H<sub>5</sub>, R''=R'''=CH<sub>3</sub>; VIR=R'=R''=R'''=CH<sub>3</sub>; VII R=R''=R'''  
=CH<sub>3</sub>, R'=C<sub>2</sub>H<sub>5</sub>). Aminoketone is obtained from IIIe by hydration:  
IIIe → n-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>C(CH<sub>3</sub>)<sub>2</sub>CH<sub>2</sub>CO(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub> (VIII). I and an aqueous  
solution of II are heated for 60-65 hr at ~100°C in a sealed ampoule;  
excess II is removed at ~45°C in a weak vacuum (IIIe-j is salted out with  
K<sub>2</sub>CO<sub>3</sub>), the residue is extracted with ether, and III is isolated by  
distillation (the quantity of initial I in g, II in g, reaction time in  
hours, the IIIa-j obtained, yield %, b.p. in °C/mm, n<sub>D</sub><sup>20</sup>, and d<sub>4</sub><sup>20</sup> are  
given): 50, 200, 60, a, 62, 145-146/3, 1.5426, 0.9836; 25, 150, 65, b, 50,  
147/2.5, 1.5470, 0.9925 (picrate, m.p. 124-125°C); 10, 33, 50, c, 15,  
193/2, -, -; 10, 35, 46, d, 15, 195/3, -, -; 20, 180, 80, e, 25, 160-162/4,  
1.5465, 0.9836; 30, 180, 60 f, 50, 153-154/5, 1.5258, 0.9655; 10, 120, 70,  
g, 30, 152/3, 1.5344, 0.9785 (picrate, m.p. 93-95°C); 20, 180, 70, h, 25,  
145-146/5, 1.5292, 0.9725; 20, 180, 75, i, 35, 150-151/3, 1.5150, 0.9480;  
17, 170, 75, j, 35, 178-180/6, 1.5380, 0.9725. IIIa-b, f-h are hydrated in

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The chemistry of vinylacetylene...

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an alcohol solution in the presence of Pt. The quantity of the corresponding initial IIIa-b, f-h is given in g, as well as the amount of H<sub>2</sub> in litres, reaction time in hours, the IV-VII obtained, yield %, b.p. in °C/mm, n<sub>D</sub><sup>20</sup>, d<sub>4</sub><sup>20</sup>, m.p. of picrate in °C: . 3.5, 0.64, 15, IV, 78, 145-146/3.5, 1.5095, 0.9529, -; 2.5, 0.49, 22, V, 88, 147-150/5, 1.5079, 0.9332, 181-182; 1.5, 0.28, 26, VI, 79, 145/2, 1.5108, 0.9505, 118; 2, 0.41, 28, VII, 80, 0, m.p. 95-97°C, 0, 0; -. For hydration with 70 ml 10% H<sub>2</sub>SO<sub>4</sub>, 2 g H<sub>2</sub>SO<sub>4</sub> and 5 g of IIIIf are mixed for 8 hr at 60-65°C, salted out with K<sub>2</sub>CO<sub>3</sub>, extracted with ether, dried with MgSO<sub>4</sub>, and VIII is obtained with a m.p. of 163-164°C/5 mm, n<sub>D</sub><sup>20</sup> 1.5172, d<sub>4</sub><sup>20</sup> 1.0016; the semi-carbazone is liquid. For Communication XXV, see RZhKhi, 1962, 13Zh56,  
[Abstracter's note: Complete translation.]

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VARTANYAN, S.A.; MUSAKHANYAN, G.A.; OGANOVA, L.V.

Chemistry of allyl chlorides. Report No.3: Synthesis of  
alkoxy acids and their esters. Izv.AN Arm.SSR.Khim.nauki 14  
no.4:337-342 '61. (MIRA 14:10)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Allyl compounds)

CHUKHADZHYAN, G.A.; MELIKYAN, R.A.; BABAYAN, Sh.A.; VARTANYAN, S.A.

Condensation of formaldehyde with acetylene. Synthesis of  
2-butyne-1,4-diol. Izv. AN Arm.SSR. Khim.nauki 14 no.5:445-449  
'61. (MIRA 15:1)

1. TSentral'naya zavodskaya laboratoriya zavoda imeni S.M.  
Kirova i Institut organicheskoy khimii AN Armyanskoy SSR.  
(Butynediol)

VARTANYAN, S.A.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No.27: Hydration of  
vinylacetylenic phenols and their ethers. Izv. AN Arm.SSR.  
Khim.nauki 14 no.5:477-485 '61. (MIRA 15:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Phenol)  
(Hydration)

VARTANYAN, S.A.; TOSUNYAN, A.O.; MASROPYAN, L.G.

Chemistry of allyl chlorides. Report No.4: Cyanoethylation  
of 1-alkoxy-3-alkene-5-cis and conversions of alkoxymitriles  
obtained. Izv. AN Arm.SSR. Khim.nauki 14 no.5:469-475 '61.  
(MIRA 15:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Alcohols)  
(Cyanoethylation)

8/081/62/000/017/046/102  
B158/B186

AUTHORS: Vartanyan, S. A., Badanyan, Sh. O.

TITLE: The chemistry of vinylacetylene. Communication XXVII.  
Hydration of vinylacetylene phenols and their esters

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 184-185,  
abstract 17Zh119 (Izv. AN ArmSSR, Khim. n., v. 14, no. 5,  
1961, 477-485 [summary in Arm.])

TEXT: The hydration of vinylacetylene phenols and their esters was studied. When  $\text{ROC}_6\text{H}_4\text{C}(\text{CH}_3)_2\text{C CCH-CH}_2$  (Ia-h; here and after a R = H, b R =  $\text{CH}_3$ , c R =  $\text{C}_2\text{H}_5$ , d R =  $\text{C}_3\text{H}_7$ , e R = iso- $\text{C}_3\text{H}_7$ , f R =  $\text{C}_4\text{H}_9$ , g R = iso- $\text{C}_4\text{H}_9$ , h R = iso- $\text{C}_5\text{H}_{11}$ ) is heated in an aqueous or water-methanol solution in the presence of  $\text{H}_2\text{SO}_4$  and  $\text{HgSO}_4$ ,  $\text{ROC}_6\text{H}_4\text{C}(\text{CH}_3)_2\text{COCH-CHCH}_3$  (IIa-h) is formed; hydration may also proceed without the addition of  $\text{H}_2\text{SO}_4$ , but is then considerably slower. The structure of II obtained is confirmed by ozonization, oxidation and hydrogenation of II. With prolonged hydration ✓

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The chemistry of vinylacetylene...

S/081/62/000/017/046/102  
B158/B186

in the presence of  $H_2SO_4$  and  $HgSO_4$  in  $CH_3OH$ , the lastnamed is combined with the II formed by a double bond, giving  $ROC_6H_4C(CH_3)_2-COCH_2CH(OCH_3)CH_3$  (IIIa-h); increase in R facilitates the combination of  $CH_3OH$  with II. For example, in the case of hydration of If-h, the only reaction products are IIIIf-h. When III is heated in the presence of a catalytic quantity of  $n-CH_3C_6H_4SO_3H$ , the  $CH_3OH$  is separated and II is formed. A mixture of 20 g Ia (see I. N. Nazarov, A. I. Kuznetsova, Izv. AN SSSR. Otd. khim. n., 1941, 431; 1942, 392), 150 ml 90%  $CH_3OH$ , some drops of  $H_2SO_4$  and 4 g  $HgSO_4$  is heated and mixed for 3 hours at  $60^\circ C$ , the  $CH_3OH$  removed, extracted with ether, dried with  $MgSO_4$ , the ether driven off, and the product distilled in vacuum; 18.5 g IIa is obtained, b.p.  $173^\circ C/5$  mm, m.p.  $56-57^\circ C$ ,  $n_D^{20}$  1.5498. Without  $H_2SO_4$  addition, the reaction described above lasts 18-20 hours to give the same yield of IIa. IIa is also obtained by heating 20 g Ia, 150 ml 5%  $H_2SO_4$ .

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S/081/62/C00/017/046/102  
B158/B186

The chemistry of vinylacetylene...

and 2 g  $HgSO_4$  for 3 hours at 50-55°C with further processing as described above, giving a yield of 19 g. Similarly, IIb-h is obtained by heating 20-25 g Ib-h (RZhKhim, 1961, 24Zh70) for 5-6 hours at 60-65°C and mixing with 150-200 ml 90%  $CH_3OH$  and 3-4 g  $HgSO_4$ . (The II is given, as well as the yield %, b.p. in °C/mm,  $n_{D,4}^{20,20}$  and m.p. in °C of dinitrophenylhydrazone (DNPH): b, 87, 144/5, 1.5298, 1.0207, 137-132; c, 80, 151-152/7, 1.5262, 0.9957, 95; d, 86, 153/4, 1.5165, 0.9951, 133; e, 84, 155.5, 1.5140, 0.9956, 117; f, 79, 161/3, 1.5216, 0.9954, 86-87; g, 80, 159-160/4, 1.5198, 0.9948, -; h, 75, 167/3, 1.5110, 0.9952, does not crystallize. The yield of reaction products is lower without  $CH_3OH$ . II was obtained by extending the reaction described above to 15-20 hours at a temperature of 60-65°C and adding 4-5 ml  $H_2SO_4$  to the reaction mass (the II is enumerated as above): b, 51, 155-156/2-3, 1.5083, 0.9998, 126-127; c, 50, 153/1, 1.5020, 0.9976, 103; d, 67, 163-165/2, 1.5042, 0.9970, 101; e, 64, 151-162/3, 1.5061, 0.9972, 122-123; f, 70, 182-183/4, 1.5048, 0.9963, does not crystallize; g, 75, 180-181/6, 1.5060, 0.9970, 127; h, 73, 189/6, 1.5055,

Card 3/6

The chemistry of vinylacetylene...

S/081/62/000/017/046/102  
B158/B186

0.9958, does not crystallize. Heating (100-120°C, 15-20 min, weak vacuum) 10 g III with ~0.1 g n-CH<sub>3</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H gives an 80-90% yield of II; the constants agreed with those of II obtained by hydrating I. The structure of II was confirmed by synthesizing IIc and IID from IIa. 10 g IIa, 3 g NaOH, 5-10 g of the corresponding alkyl halid and 80 ml water are heated for 10-15 hours, extracted with ether, washed with water, dried with MgSO<sub>4</sub>, the ether drives off, and the product distilled in vacuum; the yield is 80%; the products are identical with the IIc and IID obtained by hydrating Ic and Id. Ozonized oxygen (5% O<sub>3</sub>) is passed through a solution of 45 g IIb in 30 ml anhydrous CHCl<sub>3</sub> for 3.5 hours; this is stood for ~12 hours, 30 ml 5% H<sub>2</sub>O<sub>2</sub> is added, heated and mixed for 5 hours at 50°C, neutralized with a solution of 10 g Na<sub>2</sub>CO<sub>3</sub>, extracted three times with ether, dried with MgSO<sub>4</sub> and distilled in vacuum; 0.18 g n-CH<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>C(CH<sub>3</sub>)<sub>2</sub>COH (IV), DNPH (m.p. 173°C (from alcohol)), and 1 g IIb, b.p. 145°C/1 mm,  $n_D^{20}$  1.5075, are obtained. The residual aqueous solution is evaporated to

Card 4/6

S/61/62/000/017/046/102  
B158/B186

The chemistry of vinylacetylene...

dryness, acidified with conc. HCl, extracted with ether, dried with  $MgSO_4$ , the ether driven off, and crystals of  $n-CH_3OC_6H_4C(CH_3)_2COOH$  (V) are isolated - yield 0.8 g; m.p.  $88^\circ C$  (from alcohol), mol. wt. 193. 18.5 g  $KMnO_4$  (powder) is added to a mixture of 7.6 g IIb and 200 ml water and mixed thoroughly for 3 hours. The  $MnO_2$  precipitate is filtered off, the mixture washed with hot water, the aqueous solutions extracted with ether, dried with  $MgSO_4$ , giving crystals of IV and DNPH, m.p.  $173^\circ C$  (from alcohol). The aqueous solution is processed as in the previous experiment; V, m.p.  $88^\circ C$  (from alcohol) is obtained. With the previous sample, it does not cause any drop in the melting point. 3 g IIa in 10 ml alcohol is hydrated in the presence of a small quantity of Pt catalyst, the alcohol driven off, the residue distilled in vacuum, and 2.7 g  $n-HOC_6H_4C(CH_3)_2COCH_2CH_2CH_3$ ,  $C_{13}H_{18}O_2$  obtained, b.p.  $167^\circ C/5\text{ mm}$ ,  $n_D^{20} 1.5245$ ,  $d_4^{20} 1.0363$ , and DNPH, m.p.  $146-147^\circ C$  (from alcohol). Similarly, hydration ✓

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The chemistry of vinylacetylene...

S/081/62/000/017/046/102  
B158/B186

of 3 g II gave 2.5 g n-C<sub>4</sub>H<sub>9</sub>OC<sub>6</sub>H<sub>4</sub>C(CH<sub>3</sub>)<sub>2</sub>COCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, C<sub>17</sub>H<sub>26</sub>O<sub>2</sub>, b.p.  
156-157°C/5 mm, n<sub>D</sub><sup>20</sup> 1.5030, d<sub>4</sub><sup>20</sup> 0.9863, and DNPH, m.p. 110°C (from alcohol).

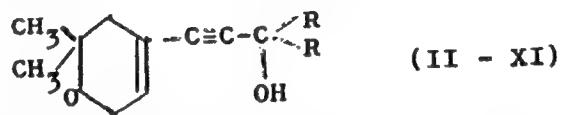
[Abstracter's note: Complete translation.]

Card 6/6

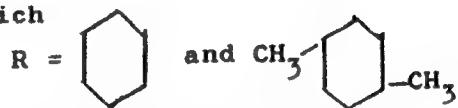
S/171/61/014/006/005/005  
E075/E136

Chemistry of vinylacetylene, . . .

was synthesized by condensing acetylene with 2,2-dimethyltetrahydropyran-4-on. The compound (I) reacted readily with ketones in the presence of powdered KOH without a solvent and gave carbinols of general formula



Hydrogenation of the carbinols in which



in ethyl alcohol solution in the presence of Pt catalyst gave the corresponding unsaturated alcohols when the carbinols with

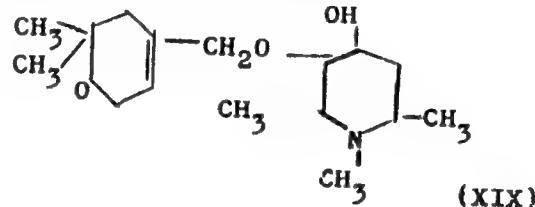


Card 2/3

Chemistry of vinylacetylene . . .

S/171/61/014/006/005/005  
E075/E136

CH<sub>3</sub>OH solution in the presence of acidic mercuric sulphide.  
The resulting compounds were the expected unsaturated ketones.  
Hydration of carbinol IX in the solution of 10% H<sub>2</sub>SO<sub>4</sub> in the  
presence of acidic mercuric sulphide gave compound XIX:



Heating of the unsaturated ketones with NH<sub>4</sub>OH gave 4-piperidones containing the tetrahydropyran ring. There is 1 table.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR

SUBMITTED: July 15, 1961

Card 3/3

VARTANYAN, S.A.; TOSUNYAN, A.O.

Synthesis of ethers of some 1, 2- and 1, 5-glycols. Zhur. ob. khim.  
31 no.5:1624-1628 My '61. (MIRA 14:5)

1. Institut organicheskoy khimii Akademii nauk Armyanskoy SSR.  
(Glycols)

VARTANYAN, S.A.; PIRENYAN, S.K.; MANASYAN, N.G.

Liquid phase hydration of acetylene with a copper catalyst.  
Zhur.ob.khim. 31 no.7:2336-2337 Jl '61. (MIRA 14:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Acetylene)

VARTANYAN, S.A.; CHUKHADZHYAN, G.A.; MELIKYAN, R.A.; BABAYAN, Sh.A

Laboratory method of preparing primary-secondary and primary-tertiary  
acetylenic glycols. Izv.AN Arm.SSR.Khim.nauki 15 no.1:45-51 '62.  
(MIRA 15:7)

1. TSentral'naya zavodskaya laboratoriya zavoda imeni S.M. Kirova i  
Institut organicheskoy khimii AN Armyanskoy SSR.  
(Glycols)

VARTANYAN, S.A.; CHUKHADZHYAN, G.A.

Chemistry of vinylacetylene. Report No.29: Synthesis and conversions  
of dialkyl- $\Delta'$ -clopentenylethyne carbinols. Izv.AN ArmSSR.Khim.nauki  
15 no.1:53-61 '62. (MIRA 15:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Butenyne) (Alcohols)

VARTANYAN, S.A.; GEVORKYAN, Sh.A.; DANGYAN, F.V.

Chemistry of allyl chlorides. Report №.5: Synthesis and conversions  
of 1-chloro-5-alkoxy-3-chloro(methyl)-2-alkenes. Izv. AN Arm. SSR. Khim-  
nauki 15 no.1:63-71 '62. (MIRA 15:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Olefins)

VARTANYAN, S.A.; TOSUNYAN, A.O.

Vinylacetylene chemistry. Report No.33: Synthesis and  
transformations of 1-chloro-4-methoxymethyl-2,3-heptadiene  
and 1-chloro-5-methoxy-2,3-pentadiene. Izv.AN Arm.  
SSR. Khim.nauki 15 no.4:337-345 '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Butenyne) (Heptadiene) (Pentadiene)

VARTANYAN, S.A.; VARDAPETYAN, S.K.; BADANYAN, Sh.O.

Vinylacetylene chemistry. Report No.34: Hydration of vinylacetylene compounds containing a substituted benzene nucleus. Izv.AN Arm. SSR. Khim.nauki 15 no.4:347-352 '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Butenyne) (Hydration)  
(Benzene derivatives)

VARTANYAN, S.A.; ZHAMAGOETSYAN, V.N.

Vinylacetylene chemistry. Report No.35: Some transformations  
of 2,2-dimethyl-4-ethynyltetrahydropyran-4-ol. Izv.AN Arm.  
SSR. Khim.nauki 15 no.4:353-362 '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Butenyne) (Pyranol)

S/171/62/015/005/004/008  
E075/E592

AUTHORS: Vartanyan, S.A. and Dangyan, F.V.

TITLE: Addition of  $\alpha$ -chloroalkyl ethers to styrene and the conversions of the obtained 1-phenyl-1-chloro-3-methoxybutane

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya khimicheskikh nauk. v.15, no.5, 1962, 443-447

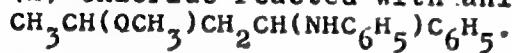
TEXT: Synthesis of aromatic  $\gamma$ -chloroethers, which could serve as starting materials for numerous organic syntheses is described. It was established that  $\gamma$ -chloroalkyl ethers combine with styrene in the presence of  $ZnCl_2$  in ether to give  $C_6H_5CHClCH_2CH(OCH_3)R$  (I). The yields were 63.4% and 86.5% for  $R = CH_3$  and iso- $C_4H_9$ , respectively. (I) chloride,  $R = CH_3$ , reacted with sodium acetate in acetic acid yielding  $C_6H_5CH(OCOCH_3)CH_2CH(OCH_3)CH_3$  (II). The hydrolysis of (II) in aq NaOH for 50 hours at 95°C gave alcohol  $C_6H_5CH(OH)CH_2CH(OCH_3)CH_3$ , identical with the alcohol resulting from the saponification of chloride (I),  $R = CH_3$ .

Card 1/2

Addition of  $\alpha$ -chloroalkyl ...

S/171/62/015/005/004/008  
E075/E592

Heating the latter at 65° - 70°C for 12 hours, with ethanol in the presence of solid KOH, gave 1-methoxy- $\beta$ -phenyl-3-ethoxybutane. (I) chloride reacted with aniline to give  $\gamma$ -aminoether



ASSOCIATION: Institut organicheskoy khimii AN ArmSSR  
(Institute of Organic Chemistry AS ArmSSR)

SUBMITTED: June 19, 1962

Card 2/2

S/171/62/015/005/005/008  
E071/E592

AUTHORS: Vartanyan, S.A., Zhamagortsyan, V.N. and Badanyan, Sh.O.

TITLE: Chemistry of vinylacetylene. Communidation 36:  
Condensation of vinylacetylene and isopropenylacetylene  
with aldehydes and ketones in the presence of powdered  
potassium hydroxide without a solvent

PERIODICAL: Akademiya nauk Armyanskoy SSR. Izvestiya. Seriya  
khimicheskikh nauk. v.15, no.5, 1962, 449-454

TEXT: The possibility of condensation of vinylacetylene and  
isopropenylacetylene with ketones of aromatic, alicyclic, and  
heterocyclic series, as well as with ketones containing functional  
groups, e.g. hydroxy-;alkoxy- etc., was investigated. The method  
consists of cooling powdered potassium hydroxide (in a three-  
necked flask) with ice and salt, adding the required hydrocarbon  
followed by an aldehyde or ketone at such a rate that the tempera-  
ture does not exceed -5°C. It was found that using this method  
vinylacetylene condenses with  $\alpha$ -ketols, also with  $\alpha$ - and  
 $\gamma$ -alkoxyketones, but not with  $\beta$ -alkoxyketones; isopropenylacetylene  
condenses with aldehydes and ketones forming corresponding  
vinylacetylene alcohols; alicyclic and heterocyclic ketones condense

Card 1/2

Chemistry of vinylacetylene ...

S/171/62/015/005/005/008  
E071/E592

similarly with isopropylacetylene with the formation of corresponding carbinols, acetophenone and benzophenone condenses with vinylacetylene and isopropenylacetylene with the formation of the corresponding carbinols. Boiling points, refractive indexes, densities, yields and elementary analyses of the newly synthesized alcohols are given. There are 2 tables.

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR  
(Institute of Organic Chemistry AS ArmSSR)

SUBMITTED: August 10, 1962

Card 2/2

VARTANYAN; S. A.

JUN 25 1963

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PHASE I BOOK EXPLOITATION

SOV/6195

Nauchnaya konferentsiya institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR. Yerevan, 1957.

Materialy nauchnoy konferentsii institutov khimii Akademiy nauk Azerbaydzhanskoy, Armyanskoy i Gruzinskoy SSR (Materials of the Scientific Conference of the Chemical Institutes of the Academies of Sciences of the Azerbaydzhan, Armenian, and Georgian SSR) Yerevan, Izd-vo AN Armyanskoy SSR, 1962. 396 p. 1100 copies printed.

Sponsoring Agency: Akademiya nauk Armyanskoy SSR. Institut organicheskoy khimii.

Resp. Ed.: L. Ye. Ter-Minasyan; Ed. of Publishing House: A. G. Slikuni; Tech. Ed.: G. S. Sarkisyan.

PURPOSE: This book is intended for chemists and chemical engineers, and may be useful to graduate students engaged in chemical research.

Card 1/11

## Materials of the Scientific Conference (Cont.)

SOV/6195

COVERAGE: The book contains the results of research in physical, inorganic, organic, and analytical chemistry, and in chemical engineering, presented at the Scientific Conference held in Yerevan, 20 through 23 November 1957. Three reports of particular interest are reviewed below. No personalities are mentioned. References accompany individual articles.

## TABLE OF CONTENTS:

## PHYSICAL CHEMISTRY

Tsitsishvili, G. V., and Ye. D. Rosebashvili. Use of the Magnetic Method in Studying Some Complex Cobalt Compounds	5
Nanobashvili, Ye. M., and L. V. Ivanitskaya. The Effect of $\gamma$ -Radiation on Colloidal Solutions of Gallium, Indium, and Thallium Sulfide	23
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Card 2/11

## Materials of the Scientific Conference (Cont.)

SOV/6195

silicate mineral) as a catalyst carrier have been determined. The study was of interest because this petroleum fraction is used as diesel and jet fuel and is degraded for these purposes by the presence of n-alkanes. Optimum conversion conditions were obtained with hydrogenation under 30 atm. H in a flow reactor at 450°C with a hydrogen/hydrocarbon molar ratio of 3: 1 and a hydrocarbon space velocity of 0.5 hr<sup>-1</sup>. Catalysis with 0.5% of Pt or Pd on Al<sub>2</sub>O<sub>3</sub> or "gumbrin" caused an extensive conversion of normal undecane and dodecane and improved the motor properties of hydrogenation-cracking products by increasing their heating efficiency by 80 kcal/kg and reducing their pour points by 16 to 48.5°C.

Mamedaliyev, Yu. G., M. A. Dalin, and T. I. Mamedov. Cata-  
lytic Dehydrogenation of the Isopentane Fraction

324

Vartanyan, S. A., V. N. Zhamagortsyan, and Sh. O. Badanyan.  
Synthesis and Investigation of Aminoacetylenic and  $\alpha$ -Alko-  
xyvinylacetylenic Alcohols

336

Card 9/11

VARTANYAN, S.A.

Chemistry of vinylmethynylcarbinols. Usp.khim. 31 no.10:1137-  
1164 O '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN Armyanskoy SSR.  
(Methanol) (Unsaturated compounds)

S/079/62/032/010/003/008  
D204/D307

AUTHORS: Vartanyan, S.A., Vardapetyan, S.K., and Badanyan, Sh.O.

TITLE: The chemistry of vinylacetylene. XXX. The synthesis and transformations of vinylacetylenic cresols and their esters

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 10, 1962;  
3188 - 3195

TEXT: The present continuation of earlier work, in which it was shown that vinylacetylenic derivatives of phenol and anisole may be prepared by alkylation of the phenols with various vinyl-ethinyl carbinols, was aimed at correlating the structure of the carbinols to their alkylating properties. Phenol, *o*-cresol and its esters were alkylated with vinylethinyl carbinols containing alkyl, alicyclic and heterocyclic radicals. The reactions were carried out in the presence of  $H_3PO_3$ , under reflux, at  $65-70^\circ C$ , for 30-50 hours, obtaining the corresponding *p*-substituted compounds in 30-80 % yields. The *p*-substituted vinylacetylenic phenols were readily esterified. ✓

Card 1/2

The chemistry of vinylacetylene ...

S/079/62/032/010/003/008  
D204/D307

rified, in 70-85 % yields, with the corresponding alkyl halides, in the presence of NaOH, on boiling for 15-20 hrs. The corresponding saturated o-cresols and their esters could be obtained by hydrogenating the p-substituted compounds, either over a Pt catalyst, at 1 atm, or over Raney nickel, at 15-17 atm. There are 3 tables.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Armyanskoy SSR (Institute of Organic Chemistry of the Academy of Sciences, Armenian SSR)

SUBMITTED: July 21, 1961

Card 2/2

VARTANYAN, S.A.; TOSUNYAN, A.O.; MESROPYAN, L.G.

Chemistry of allyl chlorides. Part 6: Addition of  
 $\alpha$ -chloromethyl- and  $\alpha$ -chloroethyl acetates to isoprene,  
chloroprene, and bivinyl. Zhur,ob,khim, 32 no.11:3707-3711  
N '62. (MIRA 15:11)

(Acetic acid)

(Butadiene)

VARTANYAN, S.A.; BADANYAN, Sh.O.; MUSAKHANYAN, G.A.

Chemistry of vinylacetylene. Report No.38: Hydrochlorination  
of vinylisopropenylacetylene, dimethylvinylethyne-carbinol,  
and dimethylvinylthynylchloromethane in the presence of various  
catalysts. Izv. AN Arm.SSR. Khim. nauki 16 no.1:19-29 '63  
(MIRA 17:8)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

GEVORKYAN, I. Kh., prof; VARTANYAN, S.A.; NAZARYAN, F.A.

Experience with the use of the curarelike preparation bromotilin  
made in the Soviet Union. Vest.khir. no.1:96-99'63. (MIRA 16:7)

1. Iz gospital'noy khirurgicheskoy kliniki (zav.-prof.I.Kh.  
Gevorkyan) Yerevanskogo meditsinskogo instituta (dir.-prof.  
S.M.Galstyan).  
(MUSCLE RELAXANTS)

VARTANYAN, S.A.; MESROPYAN, L.G.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No.39: Order of addition  
of chloromethyl ethers to vinylisopropenylacetylene and  
some transformations of obtained chloride. Izv. AN Arm SSR  
Khim. nauki 16 no.2:137-144 '63. (MIRA 17:8)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; OGANOVA, L.V.; BADANYAN, Sh.O.

Letter to the editor. Interaction of amines with diacetylenic alcohols. Izv. AN Arm.SSR. Khim.nauki. 16 no.3;297-298 '63. (MIRA 17:2)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; NORAVYAN, A.S.

Chemistry of vinylacetylene. Report No.41: Synthesis and some  
transformations of substituted divinyl ketones. Izv.AN Arm.SSR.  
Khim.nauki 16 no.4:391-397 '63. (MIRA 16:9)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; GIRGORYAN, L.G.

Chemistry of vinylacetylene. Report No.42: Synthesis of  
4-hydroxytetrahydropyran-4-carboxylic acids and their esters.  
Izv. AN Arm.SSR. Khim.nauki 16 no.4:399-405 '63. (MIRA 16:9)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; TOSUNYAN, A.O.

Chemistry of vinylacetylene. Report No. 43: Addition of chloromethyl ethers to ethers of vinylacetylene alcohols and some transformations of alkoxy chlorides produced. Izv. AN Arm. SSR. Khim. nauki 16 no. 5:499-505 '63.

(MIRA 17:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; VARDAPETYAN, S.K.; BADANYAN, Sh.O.

Chemistry of vinylacetylene. Report No. 44: Alkylation of  
an aromatic ring with diene dichlorides and chloroalcohols.  
Izv. AN Arm. SSR. Khim. nauki 16 no.5:507-514 '63.  
(MIRA 17:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8

VARTANYAN, S.A.; OGANOVA, L.V.; BADANYAN, Sh.O.

Interaction of alcohols with diacetylenic alcohols and  
glycols. Izv. AN Arm. SSR. Khim. nauki 16 no.5:515-516  
'63. (MIRA 17:1)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8"

VARTANYAN, S.A.; BADANYAN, Sh.P.; MUSHEGYAN, A.V.

Chemistry of vinylacetylene. Report No. 45: Synthesis and conversion of vinylacetylenic amines (acetylene-alkene-cumulene rearrangement in vinylacetylenic systems). Izv. AN Arm. SSR  
Khim nauki 16 no.6:547-557 '63 (MTRA 17:8)

1. Institut organicheskoy khimii AN ArmSSR.

VARTAN'YAN, S.A.

Current problems in planning and management. Vest. sviazi 23 no.  
7:26-27 Jl '63. (MIRA 17:2)

1. Nachal'nik planovo-finansovogo otdela Krasnodarskogo krayevgo upravleniya svyazi.

VARTANYAN, S. A.; TOSUNYAN, A. O.; MESROPYAN, L. G.

Chemistry of vinylacetylene. Part 37: Addition reactions of  
 $\alpha$ -chloromethyl ethers to 5-chloro-5-methyl-1-hexen-3-yne  
and some transformations of the products obtained. Zhur. ob.  
khim. 33 no.1:62-67 '63. (MIRA 16:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

(Hexenyne) (Ethers)

VARTANYAN, S.A.; SHAGBATYAN, Sh.L.

Chemistry of vinylacetylene. Part 46: Synthesis and transformations  
of new vinylacetylenic alcohols with a dihydropyran ring. Izv.AN  
Arm.SSR.Khim.nauki 17 no.1:95-102 '64. (MIRA 17:4)

1. Institut organicheskoy khimii Armyanskoy SSR.

VARTANYAN, S.A.; MUSAKHANYAN, G.A.; AVETYAN, L.O.

Chemistry of vinylacetylene. Part 47: Hydrochlorination of  
methylethylvinylethynylcarbinol, methylethylvinylethynylchlor -  
methane, and 5-methyl-1,5-heptadien-3-yne. Izv. AN Arm. SSR.  
Khim.nauki 17 no. 2:164-172 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTYANYAN, S.A.; TOSUNYAN, A.O.; MELKONYAN, S.A.

Chemistry of vinylacetylene. Part 48: Order of the addition  
of chloromethyl ethers to isopropenylacetylene and some trans-  
formations of the alkoxy chlorides obtained. Izv.AN Arm.SSR.  
Khim.nauki 17 no. 2;184-190 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; BADANYAN, Sh.O.; AGABABYAN, R.G.

Addition of dimethylamine to acetylenic alcohols. Izv. Ak Arm.  
SSR. Khim. nauki 17 no. 2:191-195 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; NORAVYAN, A.S.

Chemistry of vinylacetylene. Part 49: Some transformations  
of 2-propyl- and 2-methyl-2-ethyl-4-vinylethinyltetrahydropyran-ols.  
Izv. AN Arm.SSR.Khim.nauki 17 no. 2:196-203 '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; GRIGORYAN, L.G.; ZHAMAGORTSYAN, V.I.

Oxidation o vinylacetylenic alcohols and their ethers by  
means of perhydrol in acetic acid solution. Izv.AN Arm.  
SSR.Khim.nauki 17 no. 3:348-349 '64. (MIRA 17:7)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

AUTHOR: Vartanyan, S. A.; Badanyan, Sh. O.; Mushegyan, A. V.

title: Acetylene-allene-cumulone rearrangement during

SOURCE: AN ATOMIC ENERGY RESEARCH INSTITUTE

Abstract: The authors studied the reaction of acetylene, allene, amine, cumulene amine, allyl, acetylene, acryl, and their analogs with chlorine in benzene solution.

Keywords: Acetylene, allene, cumulene amine, allyl, acryl, chlorine, benzene, substitution, nucleophilic substitution, chlorination.

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8

L-23070-15

ACCESSION NR: AP4049822

ANALOGUE OF A POLYMER PREPARED BY POLYMERIZATION OF (III) AND (IV).  
THE POLYMERIZATION PRODUCTS OF (III) AND (IV) ARE  
ALSO DESCRIBED IN THE ART. THE POLYMERIZATION CONDITIONS  
ARE NOT SPECIFIED.

BY V. V. SARKISOV, N. V. KARABYAN, AND V. V. SOKOLOV,  
ALL UNION RESEARCH INSTITUTE OF ORGANIC CHEMISTRY.

ANALOGUE

SUBMITTED: 18JAN64

ENCL: 00

SUB CODE: OC GC

NO REF Sov: 004

OTHER: 00

Card 2/2

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8"

ACCESSION NR: AP4049823

S/0171/64/017/005/0513/0516

AUTHOR: Vartanyan, S. A ; Pirenyan, S. K ; Tomkadzhyan, R. V

TITLE: *Vinylnitrilolene* (vinylidene cyanide) and its reaction with alkylene halides

Summary: An apparatus for the preparation of vinylidene cyanide is described. It consists of a vertical glass tube which is heated from below by an electric coil. The tube has a side arm at the top which is connected to a condenser. The apparatus is used to prepare vinylidene cyanide by the reaction of acrylonitrile with phosphorus oxychloride. The yield of vinylidene cyanide is up to 85%.

corresponding dienes (up to 85%) were achieved. Especially good results could be obtained by distilling the diene while it was being formed. The operation is then considerably shorter than when the diene is formed first and then distilled off. In addition, the catalyst is always present in the apparatus for adding the diene. The catalyst is not removed.

carbonyl groups were dehydrated. The yields of dienes are unchanged in the presence of

L 23078-65 /

ACCESSION NR: AP4049823

carbinol, diethylvinylethynyl carbinol, vinylethynylcyclohexanol, and 2, 2-dimethyl-4-vinylmethylenetriahydronaphthalene. One art has: 3 chemical formulas

ASSOCIATION: Institut organicheskoy khimii AN ArmSSR (Institute of Organic Chemistry, AN ArmSSR)

SUBMITTED 14 Nov 63

ENCL: 00

SUB CODE: OC, G

NO REF SOV: 007

OTHER: 002

Card 2/2

VARTANYAN, S.A.

Advances in the chemistry of divinylacetylene. Usp.khim. 33  
no. 5:517-548 My '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; BADANYAN, Sh.O.; AGABABYAN, R.G.

Chemistry of vinylacetylene. Part 51: Addition of amines to  
dialkylaminomethylvinylacetylenes. Izv. AN Arm.SSR.Khim.nauki  
17 no.4:407-411 '64. (MIRA 18'6)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; NORAVYAN, A.S.; ZHAMAGORTSYAN, V.N.

Mutual transformations of six-membered heterocycles containing  
sulfur, nitrogen, and oxygen. Izv. AN Arm.SSR.Khim.nauki 17  
no.4:436-440 '64. (MIRA 18:6)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; TROYBYAN, A.F.

Chemistry of Acetylene. Part II. Effect of  $\delta$ -valerolactone esters  
to tetramethylbutyne-1,4-hic and some transformation of products  
obtained. Izv. AN Arm. SSR. Khim. Nauki 17 no. 5-572 (1966)

1. Institut organicheskoy khimii AN Arzeyevskoy SSR.

VARTANYAN, S.L.; PIRENYAN, S.K.; AVETIAN, L.C.; TOKMADZHYAN, R.V.

Chemistry of vinylacetylene. Part 54: Reaction of formaldehyde  
with tertiary vinylacetylenic alcohols in the presence of cation  
exchangers. Izv. AN Arm. SSR, Khim. nauk 17 no.6:672-675 '64.  
(MIRA 18:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; ZHAMAGORTSYAN, V.N.; GRIGORYAN, I.G.

Chemistry of vinylacetylene. Part 55: Synthesis and transformations  
of 2,2-dialkyl-5-chlorotetrahydropyran-4-ones. Izv. AN Arm. SSR.  
Khim.nauki 17 no.6:682-692 '64. (MIRA 18:6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; GANOVA, L.V.; BADANYAN, Sh.O.

Reaction of amines with diacetylenic glycols. Izv. AN Arm. SSR, khim.  
nauk' 17 no.6:709-712 '64. (MISA 18.6)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANIAN, S.A.; OGANOVA, L.V.; RUMANYAN, Sh.O.

Chemistry of vinylacetylene. Part 55: Addition of amides to di-methyldiacetylenylcarbinol. Zhur. org. khim. 1 no.1;37-40 Ja '65.  
(MIRA 18:5)  
1. Institut organicheskoy khimii AN ArmSSR.

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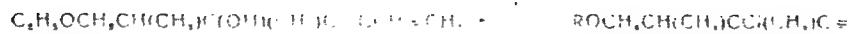
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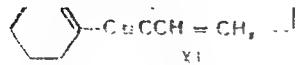
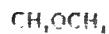
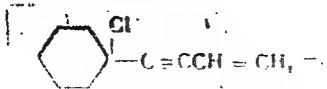
obtained by the same method as the corresponding ester.

Made of the addition of ethylmagnesium bromide to the ester.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8"

ACCESSION NR: AP5010262



XII

The formation of the same monochloride XIII in each cases (not stated in each case)

Card 3/4

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8

NO PEG CIV 005

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858710012-8"

VARTANYAN, S.A.; NORAVYAN, A.S.; ZHABOORTSYAN, V.N.

Interaction of hydrogen sulfide with  $\beta$ -methoxy ketones in the presence of sulfuric acid. Izv. AN Arm.SSR. Khim.nauki 18 no.1:124-125 '65. (MIRA 18:5)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; PIRENYAN, S.K.; TOKMADZHYAN, R.V.

Dehydration of tertiary diacetylenic glycols. Izv. AN Arm.SSR.  
Khim.nauki 18 no.1:126-127 '65.

(MIRA 18:5)

1. Institut organicheskoy khimii AN ArmSSR.

VARTANYAN, S.A.; VARDAPETYAN, S.K.; BADANYAN, Sh.O.

Alkylation of phenols and their ethers by vinylacetylene  
ethers and chlorides. Izv. AN Arm.SSR. Khim. nauki 18 no.2:  
222-224 '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN ArmSSR. Submitted December  
29, 1964.

MARTANYAN, G. G., AKOYAN, G. O., MYASLYAN, M. G.

Chemistry of vinylacetylene. Part 63. Synthetic and crystal structure of esters of vinylacetylenic keto and dicarboxylic acids. UDC 547.553.2'165.

USSR. Khimnauki 18 no.4 366-370 1965. (USSR. U.S.S.R.)  
Institut organicheskoy khimii im. V. I. Brat'ya  
June 4, 1965.

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1. Institut organicheskoy khimii AN Arzamaskoj SSR. Submitter:  
Sibr. 5, 1965.

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Reactions of addition of  $\alpha$ -chloroalkyl ethers to unsaturated compounds. Usp.khim. 34 no.4:618-629 Ap '65.

(MIRA 18:8)

1. Institut organicheskoy khimii AN Armyanskoy SSR.

VARTANYAN, S.A.; BADANYAN, Sh. O.; AGABABYAN, R.G.; OGANYAN, V.

Chemistry of vinylacetylene. Part 70: Addition of hydrogen chloride to dimethylisopropenylathynylcarbinol, dimethylisopropenylathynylchloromethane, and diisopropenylacetylene.  
Zhur. org. khim. 1 no. 12:2097-2101 D '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN Armyanskoy SSR. Submitted  
November 3, 1964.

VARTANYAN, S.A.; PIRENYAN, S.K.; TOKMADZHYAN, R.V.

Chemistry of vinylacetylene. Part 57. Dehydration of  
symmetric and asymmetric acetylenic glycols in the presence  
of espatite KU-1. Izv. AN Arm.SSR. Khim. nauki 18 no.2:175-  
177 '65.  
(MIRA 18:11)

1. Institut organicheskoy khimii AN ArmSSR. Submitted April  
23, 1964.

VARTANYAN, S.A.; GRIGORYAN, L.G.; ZHAMAGORTSYAN, V.N.

Synthesis and transformations of some 3-cyanotetrahydrofuran-3-ols.  
Izv. AN Arm.SSR. Khim. nauki 18 no.2:200-203 '65.

(MIRA 18;11)

1. Institut organicheskoy khimii AN ArmSSR. Submitted April  
23, 1964.

OVSEPYAN, Ye.N.; TARAYAN, V.M.; SHAPOSHNIKOVA, G.N.; VARTANYAN, S.A.;  
TOSUNYAN, A.O.; MESROPYAN, L.G.; KUROYAN, R.A.

Letters to the editors. Izv. AN Arm.SSR. Khim. nauki 18  
(MIRA 18:11)  
no.2:225-228 '65.

1. Yerevanskiy gosudarstvennyy universitet, kafedra analiticheskoy khimii (for Ovsepyan, Tarayan, Shaposhnikova).
2. Institut organiceskoy khimii AN ArmSSR (for Vartanyan, Tosunyan, Mesropyan, Kuroyan).

VARTANYAN, S.A.; DANGYAN, F.V..

Chemistry of vinylacetylene. Part 58: Addition of chloro-  
ether to allylvinylacetylene and vinylpropenylacetylene and  
some transformations of chlorides obtained. Izv. AN Arm.  
SSR. Khim. nauki 18 no.3:269-273 '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN ArmSSR. Submitted June 18,  
1964.

VARTANYAN, S.A.; TOSUNYAN, A.O.; KOSTOCHKA, L.M.

Chemistry of vinylacetylene. Part 59: Addition of chloro-methyl ether to  $\Delta^1$ -cyclohexenylacetylene and some transformations of chlorides obtained. Izv. AN Arm. SSR. Khim. nauki 18 no. 3:274-277 '65. (MIRA 18:11)

1. Institut organicheskoy khimii AN ArmSSR. Submitted May 14, 1964.